

REMARKS

I. Introduction

Applicant and the undersigned would like to thank Examiner Ganesan and Examiner Isabella for the courtesies extended during the personal interview granted on June 23, 2009. The parties discussed the claimed invention, the Morgan and Wellisz patents, and agreed upon amendments that would render claims 22 and 23 patentable. Applicants have received and agree with the Examiner interview summary.

Upon entry of the present amendment, claims 22-33 will be pending. Claims 1-21 have been cancelled without prejudice to their presentation in a continuation application. Claims 22-25 have been amended, support for which appears in the specification at page 4 (describing that the mesh is encased in the resin), page 9 (describing that all sides of the matrix have porous surfaces), and page 8 (defining the barrier surface as a “non-porous barrier surface.”)

Claims 26-33 have been added, support for which appears in the specification at page 6 (describing an embodiment in which it is possible to extend the mesh from the implant structure to provide a metal projection to be employed for attachment), original claim 11 (reciting at least one opening in the mesh), original claim 2 (defining the metal mesh as being titanium), and original claim 8 (defining the polyethylene as high density polyethylene). No new matter has been added. Based on the following remarks, Applicant respectfully requests reconsideration and an expedited allowance of the pending claims.

II. 35 U.S.C. § 103--Morgan

The Examiner has rejected claims 1-5, 7-8, 10-11 and 24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,380,328 to Morgan. Without acquiescing to the Examiner's rejections but in the interest of advancing the prosecution of this application, Applicant has cancelled those claims and amended claim 24 to depend from claim 22 (not included in this set of rejections), rendering this rejection moot.

III. 35 U.S.C. § 103--Morgan in view of Wellisz

The Examiner rejected claims 22-23 and 25 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,380,328 to Morgan in view of U.S. Patent No. 5,743,913 to Wellisz. The Examiner's position is that Morgan teaches the polymer layer having pore sizes of 0.2-3 microns such that the polymer layer prevents tissue cells from passing through for the purpose of protecting tissue regeneration at the defect site. The Examiner admits, however, that Morgan fails to teach pores sized to allow tissue ingrowth but submits that Wellisz teaches the use of polyethylene granules on a titanium bone implant for the purpose of acting as a lattice to promote tissue ingrowth and thus healing. The Examiner submits that it would have been obvious to combine Morgan's bone-facing surface of the implant with a layer consisting of polyethylene granules as taught by Wellisz in order to arrive at the claimed invention. Applicant respectfully traverses this rejection and requests reconsideration and withdrawal thereof.

First, as discussed during the interview, Morgan does not teach or suggest the claimed pore size. Morgan provides a membrane material having a pore size between 0.2-3 microns in order to selectively admit biological nutrients but to exclude unwanted cells which are

harmful to the tissue healing process. Morgan, col. 2, lines 56-61. Morgan implicitly seeks to *prevent* fibrovascular ingrowth with its pore size, whereas the present invention seeks to *encourage* fibrovascular ingrowth by providing the claimed pore size.

The combination of Morgan with the Wellisz patent does not solve this lack of disclosure because Wellisz simply suggests a surface layer of polyethylene granules deposited on a titanium base. The surface layer of granules does not provide the claimed porosity, because a *layer* of polyethylene granules does not provide the porous *matrix* as claimed.

Second, the Morgan material is not a “porous polyethylene matrix” as claimed; its closest embodiment to the claimed invention is two sheets of membrane sandwiching a metal mesh, as shown in Morgan FIG. 5, reproduced below. This results in noticeable gaps between the membrane and the mesh, as shown in Morgan FIG. 7, also reproduced below.

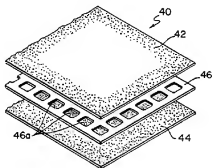


FIG. 5.

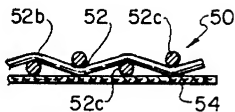


FIG. 7.

By contrast, the claimed invention provides a “porous polyethylene matrix” that fills spaces within the mesh and encases the mesh, as illustrated by FIG. 18 of the present application, reproduced below.



FIG. 18

If heat and pressure were used in Morgan to cause the Morgan membrane to flow into the interstices or spaces in its mesh as suggested by the Examiner, the structure of the membrane would break down and likely fuse together to form a solid piece of PTFE, which would prevent passage of the desired nutrients, one of the principle purposes of the Morgan material.

Finally, the Morgan material is polytetrafluoroethylene (PTFE) or expanded PTFE (e-PTFE), commercially available as Gore-Tex®, not polyethylene as claimed. The Wellisz granules are a “layer” of polyethylene *granules*, which do not form a porous polyethylene *matrix* as claimed.

New claims 26-29 depend from and incorporate all limitations of allowable claims 22 and 23. Accordingly, their allowance is also respectfully requested.

At least because of these reasons and as discussed during the interview, it is believed that the presently presented claims are in immediate condition for allowance. An early notification thereof is thus respectfully requested.

CONCLUSION

For at least the above reasons, Applicant respectfully requests allowance of the pending claims and issuance of a patent containing these claims. If the Examiner believes there are any issues that can be resolved via a telephone conference, or if there are any informalities that can be corrected by an Examiner's amendment, she is invited to contact the undersigned.

Respectfully submitted,

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